

# **ECONOMICS OF CLOTH PRINTING IN THE DECENTRALISED SECTOR**

**A Study of Handprinting in**

**Madurai (Tamil Nadu)**

***SPONSORED BY***

**ALL-INDIA HANDICRAFTS BOARD, MINISTRY OF INDUSTRY,  
GOVERNMENT OF INDIA**

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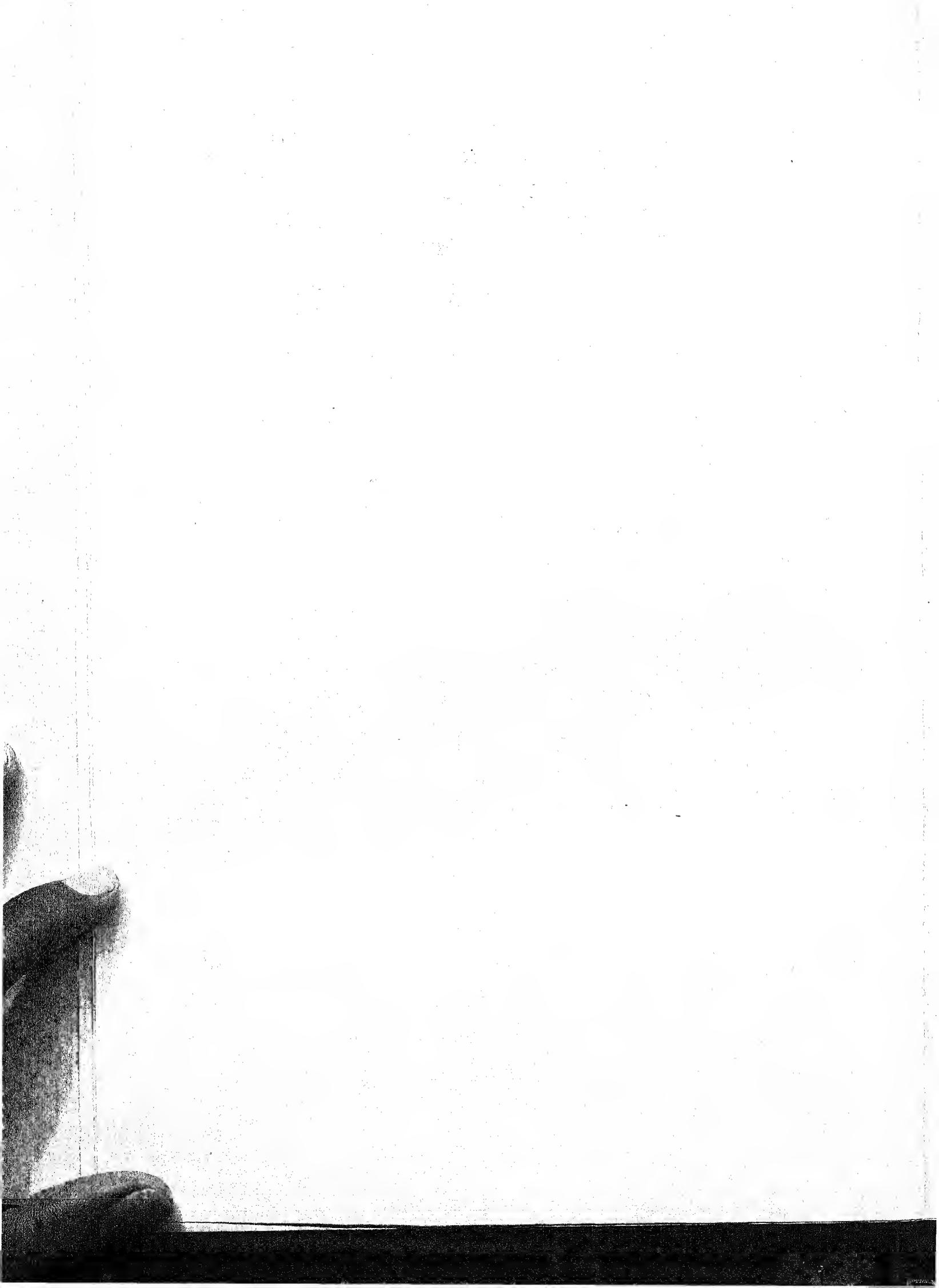
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## TEXTILE HAND PRINTING INDUSTRY OF MADURAI

### GENERAL CHARACTERISTICS

The art of handprinting is believed to have been brought to Madurai (Tamilnadu) by the Muslims who immigrated to the city around the end of the eighteenth century. For nearly a century the handprinting of textiles continued on a very limited scale. The skilled job of block printing was confined to only a few families who provided services to the residents of the area. By 1900, four small units of handprinting were established. Slowly, handprinting work secured an important place in industrial activity and by 1950 there were about fifty medium and small establishments in Madurai. Between 1955 and 1970 the growth of handprinting industry was tremendous. All the large establishments existing today, which number about 57, were established during this period. During 1980-81, it is estimated that there were 380 units of different size. At present, no specific advantage is felt by the entrepreneurs in getting their establishments registered either with the District Industries Centre or with the Assistant Director of Small Scale Industries. Thus, only 57 units, mostly the larger ones, were registered with the District Industries Centre, Madurai. Another twenty small establishments were registered with the Assistant Director of Small Scale Industries, Madurai. Because of these reasons the exact position with regard to the number of units, their size and level of activity was not available in these offices.

It is estimated that 3000 printers were working with nearly 380 handprinting establishments existing in the area. Besides, about 1000 persons were employed for different finishing and administrative jobs. Another 200 workers were engaged in making wooden blocks for printing. Nearly 700 washermen and an equal number of weavers were also attached to these units. Thus, about 5,600 non-household workers are attached to this industry on full-time basis. Besides, a large number of household workers are also attached either on full-time or on part-time basis. The household members generally look after the production and marketing of the product, besides securing job work.

It is estimated that the total capital invested in this sector at Madurai is about two crore rupees. Nearly 20 per cent of it is in the form of working capital. The annual production of handprinted textiles is estimated at about Rs.3.50 crores.

#### Organization

There are both household and non-household establishments in Madurai. About two-thirds (63 %) of the units were proprietary and the remaining (37 %) were established as partnership firms. The non-household workers are recruited from the local labour market. They are given printing and finishing assignments. The unpaid family workers supervise the different processes of production, look-after the sales or secure job work. The partnerships remain confined to the family

members or near relations only. Thus, in reality, almost all the handprinting units are owned and operated on a family basis.

The handprinting establishments of Madurai concentrate on printing of Sarees. They use three types of cloth for printing this item, i.e. cotton-handloom as well as mill-made silk and nylon. As far as the system of production is concerned the establishments may be classified as :

1. Printing own cloth.
2. Printing own cloth and undertaking job work.
3. Undertaking job work only.

The handprinting establishments undertaking job work only are largest in number. Such type of units neither require a large working capital for buying textiles nor have they to worry about the marketing of their products. The sources of job work for this category of establishments were two : dealers and direct customers. First, a few large and medium size units and a large number of small size units were getting work on contract from the dealers of handprinted textiles. The dealers supply their own textiles for printing and the handprinting establishments use their own materials required for printing and finishing. Second, dyeing and printing of used Sarees is becoming very popular in the area and a number of units get this work direct from customers. Since such a work carries a higher margin of profit, a number of handprinting units have opened their show-rooms at important market places of Madurai.

Encouraged by this trend, the unit of the National Service Scheme at Lady Doak College, in collaboration with a leading local handprinting establishment started a centre for training in handprinting for their girls students. The training centre is functioning since March 1981.

The existence of a large number of units depending only on job work is reflected in our sample also. Out of thirty handprinting establishments selected for the study, 25 were wholly dependent on job work. Three of the selected units were engaged in printing own textiles and two units were printing own textiles as well as doing job work for other handprinting units. The units doing job work get the textiles from their customers and print them either according to their own designs or the design blocks supplied by their customers.

#### Raw Materials

The raw materials used by the handprinting units such as cloth, dyes, chemicals, firewood and coal are purchased from the local market. Some large establishments who print their own cloth also have handloom units and, therefore, they buy cloth from the market only in case of shortage of supply from their own handloom products. Other units buy cloth from the market. Usually, large establishments buy raw materials in bulk and pay cash. They get some concession in the form of reduction in price. In case they purchase the materials on credit no interest is charged and the money is generally paid in a month's time. The medium and small units usually purchase

raw materials in small quantities, as and when required, on credit. They pay a slightly higher price. Thus, the practice of interest on credit purchase has been replaced by the 'higher price' for the comparatively smaller establishments who can not buy materials in bulk.

#### Marketing

A large number of the handprinting establishments at Madurai were undertaking job work from middlemen/dealers of handprinted textiles. A small proportion of the larger units were producing handprinted sarees for sale and among them also a substantial number of units were printing textiles for others on job basis. The requirement of a show-room outside Madurai or Salesmen for the units engaged only in job work is not felt. Those who print their own textiles for sale manage their business through their local show-rooms. A number of establishments cater to the requirements of the consumers directly by dyeing and printing their used sarees. This system has become very popular and a number of establishments have opened their showrooms at market places only for getting job work of this nature from the consumers.

None of the handprinting establishments of Madurai export their product to foreign markets. However, some of their products are exported to a number of countries by dealers of handprinted textiles who purchase large quantities of Madurai products. The entrepreneurs, therefore, do not have a correct idea of the value of handprinted textiles of Madurai being

exported every year. Their estimates of the value of exports range from Rupees fifty lakhs to Rupees one crore. The main markets of the Madurai products are Bombay, Hyderabad, Madras, Ahmedabad, Kanpur and Calcutta from where these sarees reach the markets of smaller cities and towns.

#### Technology

The Madurai handprinting units specialise in printing cotton, silk and nylong Sarees. More than 90 per cent of the establishments are using block printing technique. Among the remaining establishments a few use both block and screen printing techniques. One unit was doing marble printing. In marble printing skills of a superior quality are needed, as it is not actually a printing technique but free-hand sketching of design. Attractive and varied designs are drawn on cloth by accuracy and skill. The charges for this type of printing are naturally very high, and may go upto Rs.60 per Saree.

#### Labour Recruitment

The small establishments use mostly household labour for printing, supervision and marketing of the products or securing job work. In some of the one-man units the wives of the owners look after the management. The medium and large size units employ non-household printers as well as staff for supervision of production and marketing. The office staff is generally appointed by the large units on a regular basis.

The regular printers and workers engaged in preparatory and

finishing jobs are paid wages on daily basis but these workers are required to complete a 'fixed' job. Such workers have to stay at their place of work for 8 hours even if they complete their job earlier. For seasonal and casual workers payment is made at piece rate.

It is estimated that about 65 per cent of the workers engaged in this industry at Madurai belong to the same place while the remaining 35 per cent are in-migrants who immigrated to Madurai in search of employment in handprinting industry. Most of the establishments have permanent and dependable workers. In case of requirement for additional workers during the short absence of regular workers or for completing the job work in a limited time the entrepreneurs generally do not face any serious problem. The additional workers are recruited either from the 'labour market', a place where the unemployed handprinting workers gather in the morning or the regular workers bring their own skilled household members for the job. The system of recruitment at this centre is, therefore, direct and no middlemen are involved. But, generally, in such situations the casual workers demand higher wages. This suggests that there is no serious problem of unemployment among the printers. There is no trade union of handprinting workers of Madurai.

It is estimated that the monthly income of a printer ranges between Rs.200.00 and Rs.700.00 depending upon (a) the size of establishment they work in; (b) the quantum of printing work handled by them; (c) the quality of printing done by

them, and, (d) the level of the skill of the printers. The more skilled workers working in large establishments are able to earn between Rs.800 and Rs.1000 during the month preceding Deepawali.

#### PROBLEMS AND ISSUES

In order to formulate policies and programmes for the development of handprinting industry so as to utilize its employment advantage, a number of issues needed examination.

The more important of these issues were :

1. Does the industry have potential for growth ? Whether the entrepreneurs were hopeful of their future in the light of overall conditions of the industry as well as the policies and programmes of the government ?
2. What is the magnitude of the relative employment advantage of the decentralised sector such as the handprinting industry ? How does the efficiency enhancing change in technology affects this advantage ?
3. Given that the handprinting units are more or less household establishments, what is the difference in the distribution of earnings between the household workers and nonhousehold workers ? Whether the quantum of earnings has any relationship with the type of establishment ?
4. Whether there is sufficient skilled labour to fulfil the requirements of the industry ? Whether the employer-employee relations are cordial and workers feel satisfied

with their working conditions ? Whether the industry encourages artisans to become entrepreneurs ?

5. Whether the working conditions are such which help them live in satisfactory conditions ? Whether the industry attract the workers to stay on in this important craft or compel them to move to other occupations or places ?

#### The Sample

The present study is based on the responses of 30 entrepreneurs and 75 nonhousehold workers associated with the handprinting industry of Madurai. Both the samples were selected through the random selection method. The entrepreneurs were interviewed at their establishments and the workers, mostly, at their residences. The two groups of persons were interviewed through separate interview schedules.

The ownership of nearly two-thirds of the selected establishments (19) was proprietary and that of one-third was partnership. In about 55 per cent of cases the partnership was restricted to the household members of the entrepreneurs. Thus, in reality about 83 per cent of the units were family owned. The twenty-five handprinting units which were set-up by their present owners were established between 1955 and 1979 and the five units which were inherited by their present owners came under their charge between 1963 and 1976. Two of the selected entrepreneurs belong to the family of wage earning printers. This indicates that the chances of upward mobility of wage earning printers to the level of owners were very limited in the industry mainly due to the large amount

of capital needed in establishing a handprinting unit. However, the industry has potential and attraction for entrepreneurs as a significantly large proportion of the selected units were established by their present owners.

Nine of the selected establishments were registered with the District Industries Centre, Madurai.

#### The Entrepreneurs

Most of the entrepreneurs were in the middle age group, i.e. 36-50 years (60 %) followed by about 23 per cent in 26-35 and 17 per cent in 51-60 years age groups. About three-fourths of them (73.3 %) had passed high school or intermediate examination. About 23 per cent had received education upto senior basic level, and the remaining 3 per cent upto junior basic level. All the entrepreneurs were Hindu and about three-fourths of them (76.7 %) belonged to the backward castes. Among the remaining 23 per cent of the entrepreneurs about 13 per cent belonged to the Scheduled Castes and 10 per cent to higher caste groups. The native place of ninety per cent of the entrepreneurs was Madurai itself while 10 per cent had migrated from other districts of Tamil Nadu.

About 63 per cent of the entrepreneurs started their career with their present activity, 30 per cent had shifted from trading and 7 per cent from wage employment in occupations other than handprinting. There were three entrepreneurs who had other sources of income also. Two of them had textile

shops through which they were earning between Rs.8,000 and Rs.10,000 annually each. The third one had some agricultural land through which he was getting about Rs.4,000 per year.

Only 9 (30 %) of the entrepreneurs informed that their fathers were associated with this industry in some form or other : owner of handprinting unit (6), partner in a unit (1) or wage earner (2). Thus, a large number of our respondents (21) were new entrants to this industry. Only 5 of the entrepreneurs had inherited their handprinting establishments while 25 had started their units themselves.

The size of the families of most of the entrepreneurs was small. More than half of the families (17) had upto five members while 13 households had between 6 and 8 members. Thus, the average size of the family was 5. About one-fourth of the family members were working in their own establishments. The association of such a large proportion of entrepreneurs household members in their establishments suggests that even the non-household units were run on traditional 'family business' lines.

#### I : HAND PRINTING ESTABLISHMENTS

##### Capital and Earnings

The average total investment in the form of fixed capital per handprinting establishment at Madurai comes to Rs.1,05,026.66 (Table 1). Investments obviously increase with the increase in size of establishment as indicated by number

Table 1 : Average Fixed and Working Capital According to the Size of Establishments

Size: No. of print- ing tables	Fixed Capital				Index of av. fixed capi- tal (es- tablis- ments)	Index of av. fixed capi- tal (es- tablis- ments)	Work- ing Cap- ital per print- ing table
	Land & build- ing	Equip- ment & tools	Other assets	Total			
Upto 2	21,500	9,429	5,000	16,286	100	100	4,843
3-5	33,750	16,400	7,182	56,733	348	112	9,750
6-8	9,000	19,000	15,200	124,200	763	136	20,600
9-12	156,250	40,000	43,250	239,500	1471	189	45,000
13 +	275,000	87,500	26,000	388,500	2385	118	125,000
Total	2073,000	692,800	385,000	3150,800			683,900
Av. per unit	82,920	2,309	16,739	105,027			22,797

of printing tables. A similar trend has been found in working capital size. Table 1 also presents the indexes of fixed capital and average fixed capital per printing table. It indicates a significant rise in the fixed investment with the rise in the size of the establishment. The average fixed investment per printing table also shows a steady increase. However, the increase is considerably low in proportion to the rise in the index of fixed capital per establishment.

The analysis of net annual earnings of establishments of different size indicates a positive relationship between earnings and size of the units. Table 2 indicates that by and large the annual earnings of establishments increase significantly with increase in the number of printing tables. However, the average earnings per printing table show a declining trend in the large establishments.

Table 2 : Average Net Earnings of Establishments According to Their Size

Size : No. of printing tables	Average annual earnings	Index of average annual earnings per establishment	Index of average earnings per printing table
Upto 2	9,928.57	100	100
3-5	12,600.00	127	41
6-8	28,250.00	285	51
9-12	28,300.00	285	37
13 +	58,000.00	584	29

#### Growth of the Industry

For examining the extent of growth in the size of hand-printing establishments we have analysed data pertaining to possession of equipment, position of employment and production over three periods of time, i.e. 10 years back, 5 years back and last year. The data on production relates to the value of sales/services as most of the respondents expressed their inability to provide information pertaining to the quantity of production, particularly for the first two periods.

The main printing equipments of the selected handprinting establishments include printing tables, blocks and screen plates. The quantity of these items in an establishment indicates the size of the unit. In Table 3 we present the average number of these items per unit. It gives an idea of the extent of growth of establishments in terms of stock of equipment maintained during a period of ten years.

Table 3 : Stock of Equipment per Establishment

Equipment	Period (Number)		
	10 years back	5 years back	Last year
Printing tables	3.33	4.96	6.17
Blocks	116.48	219.48	381.17
Screen plates	3.00	7.00	2.67

It is evident that there has been a steady increase in the quantity of the major printing equipments, i.e. printing tables and printing blocks of the selected establishments. As mentioned earlier the screen printing technique is not popular at Madurai. It is evident from the very small quantum of stock of screens maintained by the units. The increase in the stock of two major items, i.e. printing tables and printing blocks has been significant. However, it must be pointed out that the period of 'five years back' in the time span considered by us was very significant as far as the development of the stock of selected handprinting units is concerned.

During this period, we find the average number of printing tables and blocks per handprinting unit had increased by 49 per cent and 88 per cent respectively over the stock maintained by the units 10 years back. The significant increase in the stock of printing blocks possibly indicates (a) the serious nature of competition with other units in designs and shades. This is also supported by the increase in the number of colours used by them. For example, ten years back the average number of colours used by these units was 7.8 which increased to 11.6 five years later and to 15.1 last year; and (b) the increasing demand of consumers for changes in the colour and designs of their used textile articles, particularly sarees. Catering to the consumers directly requires availability of new designs and colour shades. The outcome of this expansion of stock of equipment was enhanced printing capacity. The per shift capacity increased by 65 per cent during the first five year period and by 31 per cent during the next one.

The position of stocks of equipment of different groups of entrepreneurs has been presented in Table 4.

Table 4 : Stock of Equipment of Different Types of Establishments (Average per Establishment)

Type of establishment	Printing tables	Blocks
Work for others	6.25	385.63
Work for themselves	4.67	316.67
Work for themselves and for others	9.00	390.00
Work for others and get work done by others	3.00	450.00

It is evident that the handprinting establishments which process raw materials of their own as well as of others have a significantly larger printing capacity. Next to them are the units which depend on job work only. The expansion of all four types of establishments during the last ten years has been steady. However, the growth of units, in terms of increase in number of printing tables, has been much faster in the case of those 'working for themselves and others' and 'working for themselves', than in the case of those working for others only. During the last ten years, there has been an increase of 125.00 per cent and 100.43 per cent in the average number of printing tables of these two categories of establishments respectively. On the other hand, the increase in the average number of printing tables of the units engaged in job work only was 82.22 per cent during the same period. A similar trend was found in the case of the stock of printing blocks.

Growth of the handprinting establishments in terms of their size and the printing capacity per shift was further examined for three periods of time during the last ten years. We find that the addition of printing tables during different periods has been almost uniform in the establishments. As against the size of the units that existed ten years back about 74 per cent of the establishments had added more printing tables during the next five years. The position of last year shows that about 72 per cent of the units had expanded their size from the one that existed five years back. The position of the last decade indicates that about 78 per cent of the establishments had grown in size by adding more printing tables.

The addition of more printing tables obviously enhanced the printing capacity of the establishments. The printing capacity of all the units recorded an increase during the last ten years. Ten years back the printing capacity of about 93 per cent of the establishments was upto 500 meters of cloth in one shift. Thus, only about 7 per cent of the units were in a position to print over 500 meters per shift. The position changed significantly during the next five years when about 65 per cent of the units had the capacity to print upto 500 meters of cloth. About 35 per cent of the establishments, therefore, had the capacity to print more than 500 meters of cloth in one shift. This included about 7 per cent of the units having a capacity to print over 1000 meters of cloth. The percentage of the units with per shift printing capacity of upto 500 meters declined further during the period of next five years. About 53 per cent of the entrepreneurs reported that the per shift printing capacity of their units was upto 500 meters of cloth. Thus, about 47 per cent of the units were in a position to print more than 500 meters of cloth in one shift. Among these units 17 per cent had a capacity to print over 1000 meters of cloth in a shift. Thus, the proportion of the establishments with per shift capacity to print more than 1000 meters of cloth had increased from 3.7 per cent ten years back to 6.9 per cent five years later and further to 16.7 per cent last year.

### Employment Growth

A total number of 434 workers were engaged in the selected thirty establishments. Among them women workers numbered only 19. The number of household workers was 38 and that of non-household workers 396. Nearly 70 per cent of the women workers belonged to the families of the entrepreneurs. The employment potential of the industry at Madurai has increased significantly during the last ten years. Table 5 shows the average number of workers engaged per handprinting establishment 10 years back, 5 years back and last year.

Table 5 : Average Employment Per Establishment  
During the Last Ten Years

Type of worker	Average employment		
	10 years back	5 years back	Last year
Household	0.83	1.00	1.27
Non-household	3.83	6.30	13.20
Total	4.66	7.30	14.47

It is evident that the increase in the employment of workers, which has been about 211 per cent during a period of ten years, was mainly accounted for by the non-household workers. The increase in the average number of workers per establishment was significantly higher in the period of last five years as against the period of earlier five years. The average employment in the period of last five years recorded

an increase of about 98 per cent while during the earlier five year period it increased by about 57 per cent. This trend is found in contrast to the position of stocks of printing equipment during the two sub-periods. Such a trend indicates (a) greater utilization of the printing capacity; and (b) a significant rise in the demand for handprinted textiles during the last five years.

#### Production

The handprinting industry of Madurai concentrates on printing a variety of sarees. The textiles printed are cotton, silk and nylon. Among the 30 establishments selected for the study 27 existed ten years back. They were able to supply us information with regard to the items they produced during the three periods of time during the last ten years. The data indicate a shift in emphasis on certain items during the period of first five years. The information regarding production items 10 years back received from the entrepreneurs shows that about 70 per cent of the units were printing both cotton and silk sarees, about 11 per cent were printing only cotton sarees, 4 per cent only silk sarees and about 15 per cent of the establishments used to print both nylon and silk sarees.

During the next period of five years the proportion of the units printing silk and nylon sarees remained the same. However, the percentage of those printing cotton and silk sarees increased to 81.48 while the proportion of the units printing only cotton sarees declined to 3.7. The units which

were earlier printing only silk sarees started printing cotton sarees also. Thus, more units started printing two items simultaneously. The situation remained exactly the same during the next five years when we found that no change in emphasis on production items was recorded. Thus, the trend indicates that the handprinting establishments prefer to print two types of sarees simultaneously - most of them print cotton and silk sarees while some print silk and nylon sarees.

On further analysis we found the quantum of printing of cotton sarees had declined over the years considerably. In the thirty selected establishments 48.4 per cent of the total annual production of handprinted textiles ten years back was in the form of cotton sarees. The proportion declined to 39.6 per cent five years later. The figure, for last year shows the proportion of cotton sarees was only 27.6 per cent. The printing of silk sarees on the other hand increased significantly i.e. from 48.2 per cent ten years back to 57.0 per cent and 69.2 per cent during the next five years and last year respectively. The proportion of nylon sarees remained almost the same during the period, i.e. 3.4, 3.4 and 3.2 per cent during the periods of ten years back, five years back and last year respectively.

Another significant point that emerged from the production trends of the selected establishments was that the quantum of production of handprinted textiles had increased considerably during the last ten years. The increase was particularly significant during the recent years. The rise in per establi-

shment production of hand printed textiles over the average production ten years back was 133.4 per cent. The rise in average production five years back over the average production of ten years back was 41.3 per cent. In comparison, the selected units recorded an increase of 65.2 per cent in their average annual production last year over the average production recorded five years back. Such a trend is in consonance with the growth of employment (Table 5) recorded last year.

The analysis of the earnings of the selected establishments (Table 6) shows a consistent increase, though at varying rates, during the three periods of time in the last decade, i.e.

Table 6 : Growth of Earnings of Different Types of Establishments During the Last Ten Years

Type of establishment	Average Earnings per Establishment (Rs.)*		
	10 years back	5 years back	Last year
Work for others	8,700.00	12,969.56	20,283.33
Work for themselves	4,666.67	7,500.00	12,333.33
Work for themselves and for others	8,250.00	15,750.00	28,500.00
Work for others and get work done by others	4,000.00	6,500.00	8,000.00

\* Net earnings.

10 years back, 5 years back and last year. There is also considerable variation from one type of establishment to another.

The data indicate that there was a significant rise in the net annual earnings of all types of establishments. During the period of ten years the increase in earnings varies between 100 per cent and 245.5 per cent in the case of units under the categories 'work for others and get work done by others' and 'work for themselves and for others' respectively. The rise in earnings recorded by the units which work for themselves and work for others was 164.3 per cent and 133.1 per cent respectively. Thus, improvement in earnings of the establishments engaged in printing their own textiles as well as undertaking job work has been quite high in comparison to other types of units. This is quite understandable in view of the fact that they are the largest establishments in terms of stock of equipment (Table 4) and they also print their own textiles for sale. Their earnings, therefore, are bound to be higher than those of other establishments. On further analysis of the trend of earnings at different points of time, however, we notice a decline in the earnings of these establishments during last year. For example, these units recorded an increase of 90.9 per cent 5 years back over their earnings 10 years back. In comparison, the figures for the period of last year show an increase of about 81 per cent over the earnings 5 years back. Improvement in earnings of those who work for others was significant. An increase of 49.1 per cent was found 5 years back over the earnings 10 years back, and the rise recorded last year over the earnings 5 years back was 56.4 per cent. Some-what smaller rise in earnings was recorded in the case of units

engaged in printing only their own textiles. Over the earnings 10 years back these units recorded an increase of 60.7 per cent 5 years back and over the earnings of 5 years back these units registered an increase of 64.4 per cent last year. The units under the category 'work for others and get work done by others' have not witnessed a similar trend in the growth of their earnings, i.e. five years back they earned 62.5 per cent higher than what they had earned 10 years back but their earnings last year over the income 5 years back were only 23.1 per cent higher.

The average annual earnings of different types of units over three periods of time during the last ten years shows consistent improvements, especially in the case of establishments under the categories of 'work for others' and 'work for themselves'. Those under the categories of 'work for themselves and others' and 'work for others and get work done from others' were facing a somewhat lower rate of increase in their earnings (the unit in the latter category faced a serious decline in its earnings). Since in this category the sample had only one unit it is difficult to generalise. The units under the category 'work for themselves and others', though showing highest percentage of increase in earnings as compared to others, show a smaller percentage of increase last year as against five years back. This is possibly due to their taking up more job work in recent years. The indications are that there is availability of more job work in the market now than earlier and that job work carries a lower margin of profit.

It is because of these facts that handprinting establishment under the category of 'work for themselves and others' have not been able to maintain the rate of increase in their annual earnings. Finally, due to availability of more job work in the market the units depending only on job work were expanding and earning higher incomes.

#### Future Prospects

The entrepreneurs were equally divided when questioned about the state of their business. Half of them expressed satisfaction over the progress of their business, while the other half of the selected entrepreneurs expressed their dissatisfaction over the conditions for their business. Four major reasons were listed by those who were hopeful of the future of the industry : good market of their products, availability of skilled labour, easily available raw materials and finances. To support the attitude of hopefulness and satisfaction it may be pointed out that of the 27 units existing ten years back 11 (40.7 %) had been able to increase the size of their establishments till last year by adding more printing tables. The data show that 7 (25.9 %) selected units had increased the stock of printing tables five years back while 8 units (29.6 %) were able to add more tables last year. Thus, four units were consistently improving in terms of their size and printing capacity. The change in size of the selected establishments may be better understood from the following information :

(i) Ten years back 92.6 per cent of the establishments had upto five printing tables while the percentage of such units had come down to 63.0 per cent last year.

(ii) None of the units possessed between 6 and 8 tables ten years back whereas 14.8 per cent of the establishments fell in this category last year.

(iii) Only 7.4 per cent of the units had 9 or more tables ten years back while the percentage of such establishments last year was 22.2.

Half of the selected entrepreneurs who expressed their dissatisfaction over the state of progress of their establishments listed a few reasons for slack in business. The main reasons were tough competition with other similar units resulting in either nonavailability of sufficient job work or smaller margin of profits, higher prices of raw materials and shortage of working capital due to unhelpful attitude of banks were the main reasons. Other reasons included (a) skilled labour was limited and, therefore, they demand higher wages; and (b) government does not take any interest in developing this industry. The entrepreneurs thought these conditions were badly affecting the expansion of their establishments.

We have mentioned above that half of the selected entrepreneurs felt dissatisfied with the level of progress of their establishments. It is probably due to this reason that only 60.00 per cent of the sample showed keenness for increasing

the scope of their business. However, 61.1 per cent of them felt they would be facing some problems in expansion, relating to competition in the market, finances, raw materials and space for work. However, none of them had initiated any steps to solve these problems.

In the end of the interview the respondents were asked to suggest measures through which the industry can be developed at a faster pace. A number of them offered suggestions relating to : (a) protection of interests of the industry; (b) economising production; and (c) improving the earning capacity of workers. Regarding protection of interests of the industry, they suggested that the government should take greater interest in the industry by : (a) encouraging handprinting as an art; (b) protecting its interests against threats from the mill sector; (c) expanding the market of handprinted textiles through different organisations; (d) allotting sufficient quantity of certain kinds of cloth to the handprinting industry; (e) establishing a corporation exclusively for the handprinting industry through which financial assistance, including subsidy, to small units for expanding their printing capacity be given, supply of raw materials at reasonable rates and marketing of the products should be arranged; and, (f) providing loans on concessional rates of interest for purchasing raw materials in large quantity.

Regarding economising production most of them felt it was not possible in the prevailing conditions as the prices of raw materials, particularly, dyes and chemicals and also wages

were increasing consistently. They thought that controlled and cheaper prices of raw materials and fixation of wages of labour may help in economising on production costs to some extent. Some of them also felt the need for research and training in techniques which help produce multi-colour prints in the shortest duration.

As regards improvement in the earnings of printers the selected entrepreneurs suggested that it can be possible only if the printers : (a) take initiative in introducing new and attractive designs; (b) develop superior skills and produce better finished work; (c) increase productivity by printing at a faster speed; and, (d) refrain from absence.

#### Markets and Marketing Systems

Most of the handprinting establishments of Madurai were depending on job work only as 25 out of the 30 selected units were working with this type of arrangement. Among the remaining five units in the category 'work for themselves' two were also undertaking job work. This type of business was not confined to small establishments only. In fact, most of the units of all sizes were engaged in printing textiles for others.

None of the selected establishments was found exporting its products to foreign market. The most distinctive feature of the marketing system at Madurai is that the main customers of the products/services of handprinting establishments were the consumers. A large proportion of the units (40.00%) in

fact, depend only on household customers. The remaining 60 per cent of the entrepreneurs informed that they depend on household customers to the extent of 70 to 80 per cent of their total sales/services. Thus, about 57 per cent of units were providing services or selling their products to small retailers only to the extent of 20 to 30 per cent of their total production. Only one unit was providing its services to a stockist, to the extent of about 20 per cent of its total capacity.

Dependence on direct sales to consumers has necessitated establishment of show-rooms at market places. This is evident from the information received from the respondents. The data show that about 77 per cent of the units have their show-rooms outside the premises of their handprinting establishments - in important markets of Madurai.

When asked about the print designs, about three-fourths of the entrepreneurs maintained that they themselves decide about it. Most of them frequently change their existing print designs, either by using different colour shades or by changing the combinations in the sets of blocks (68.2 %). Nearly 32 per cent of them, however, continue copying their design for a long time. About one-fourth (26.7 %) of the entrepreneurs were printing most of their textiles through blocks supplied by their customers.

None of the selected establishments had its show-room outside Madurai. The reason was obvious, i.e. their customers were mostly the consumers themselves and only a small part of their business depended on small retailers. For these customers local show-rooms either in the printing establishment itself or in the local market were sufficient.

#### Competition

A majority of the selected entrepreneurs of Madurai did not feel seriously threatened by other handprinting establishments. In response to a question 'what difficulty do you face in competition with your rivals?' more than half of the respondents (53.3 %) said 'none at present'. However, all the respondents felt that there was competition of varying intensity among different types of enterprises. The ranks assigned to the four types of printing establishments indicating their importance in the competition are presented in Table 7.

Table 7 : Ranking of Competitors

Competitors	Ranks		
	I	II	III
1. Smaller than own	3 (10.00)	6 (26.09)	10 (47.62)
2. Similar to own	21 (70.00)	5 (21.74)	3 (14.29)
3. Larger than own	6 (20.00)	9 (39.13)	6 (28.57)
4. Modern Enterprises		3 (13.04)	2 (9.52)
<b>TOTAL</b>	<b>30 (100.00)</b>	<b>23 (76.67)</b>	<b>21 (70.00)</b>

We find that 70 per cent of the entrepreneurs were experiencing competition from three types of establishments whereas nearly 77 per cent of the establishments were facing competition from two types of units. To a multiple response question, almost the entire sample of entrepreneurs (96.67%) reported competition of varying intensity with handprinting units similar to their own while 70 per cent of the sample placed units larger than their own in different ranks. About 63 per cent of the entrepreneurs thought their competition was with units smaller than their own. The modern enterprises in the organised sector occupied an insignificant position among the competitors of handprinting industry of Madurai.

The competition was confined among the handprinting establishments of the same town. The entrepreneurs were facing competition primarily with units having similar printing capacity followed by the ones with larger capacity. Among the major competitors i.e. those in the first rank, 70 per cent of the entrepreneurs reported that their competition was primarily with units of similar size. This attitude was uniformly found among the respondents owning different size of establishments. However, a larger percentage (42.9) of those having the smallest establishments with upto two printing tables thought their main competitors were the larger establishments than those considering units similar to their own as their main contenders (28.6%).

The conditions of marketing at Madurai are such that all the selected handprinting establishments, irrespective of their size and type, have to depend on direct sale/service to consumers and most of them undertake job work. In such a situation competition in printing charges is not an unusual phenomenon. This is obvious from the responses. Among those who felt tough competition, 85.7 per cent said printing rates were low due to competition. Over one-third (35.7 %) of the respondents informed that they were compelled to provide door-to-door service while 28.6 per cent had to change their designs frequently to attract consumers. A small percentage (7.1 %) of the respondents felt the progress in sales was not at all satisfactory. Considering the fact that the markets of the larger as well as smaller handprinting establishments were similar their effect on each other in competition was felt seriously.

#### Employment Structure

The thirty handprinting establishments selected for the present study employed a total number of 434 full-time workers. Among them 396 were hired non-household and 38 unpaid family workers (Table 8). A small proportion (4.4 %) of workers were women of which over two-thirds (68.4 %) were family workers. The number of workers in the administrative categories was significantly large (124) of whom about 28 per cent (35) were classified as Managers. Among them 26 persons including 7 women were from the families of entrepreneurs. The number

Table 8 : Workers Engaged in Establishments

Process	Hired labour			Unpaid family labour			Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
<b>A. ADMINISTRATIVE</b>									
Manager	9	-	9	19	7	26	28	7	35
Clerks	44	4	48	1	1	2	45	5	50
Ministerial	39	-	39	-	-	-	39	-	39
<b>B. WORKERS</b>									
Washing	26	2	28	4	4	8	30	6	36
Printing	209	-	209	1	1	2	210	1	211
Steaming	12	-	12	-	-	-	12	-	12
Curing	11	-	11	-	-	-	11	-	11
Pressing	25	-	25	-	-	-	25	-	25
Packing	15	-	15	-	-	-	15	-	15
<b>TOTAL</b>	<b>390</b>	<b>6</b>	<b>396</b>	<b>25</b>	<b>13</b>	<b>38</b>	<b>415</b>	<b>19</b>	<b>434</b>

of Managers exceeds the number of selected establishments as some of the units had also posted a Manager at their show-room. The job of a Manager in most of the handprinting units carries a number of responsibilities such as supervision of various functions, securing job work, procurement of raw materials, marketing, maintenance of accounts, etc. The rest of the workers engaged in the 'non-production' jobs consisted of clerical and ministerial staff. Except two, all the clerks (50) were nonhousehold paid employees. Five of the clerks were women. All the workers engaged in the ministerial category were hired workers.

The proportion of workers in the allied processes at this centre is quite high and that of the printers significantly low. Out of 310 workers engaged in different production processes 68.06 per cent were printers and 31.94 per cent other workers. They were employed on a regular basis. The number of workers in allied production jobs was higher because the system of employment on piece rate wages was convenient for the employers. The availability of full-time workers also helped them in expediting different processes of handprinting. Workforce in the production processes consisted of mainly hired labour as only about 3 per cent of such workers belong to the entrepreneurs' households.

#### Labour Cost and Wage Rates

The share of printers in the production cost has been calculated on the basis of average cost of printing a unit of different items. The cost shown in the column of labour cost (Table 9) indicates the average wages paid to printers for

Table 9 : Average Cost of Production of a Unit (Rs.)

Item	Dyes	Chemicals	Other proce- ssing	Labour cost	Other cost	Total
Saree cotton	1.70	0.82	1.01	1.95	1.10	6.58
Saree silk	2.90	1.95	1.25	4.80	1.15	12.05
Saree nylon	2.51	1.77	1.10	2.75	1.05	9.18

printing the item in single/multiple colour shades, whereas other processing includes labour charges paid to other workers for allied jobs.

The cost of the cloth in the above table has been excluded as it is not a standardised item and the value of this material varies according to its quality. The variations in the cost of labour i.e. printing cost, are mainly due to the quality of the product and the number of colour shades used in printing the item. The share of printers in the cost of production of different items also indicates the labour intensive nature of the industry. The lowest average share of printers has been found in the cost of production of cotton sarees (29.64%). It was slightly higher in the case of nylon sarees (29.96%) while their share was significantly higher in the fancy item of silk sarees (39.83%). The printer's share in the cost of a cotton saree at Madurai looks is much higher than at other centres, but it is primarily due to the difference in technique of printing. Unlike other centres, cotton sarees at Madurai are printed through blocks rather than screens and block printing is more labour intensive. Hence the higher labour cost.

In the selected sample of establishments no hired female printers were found and, therefore, a comparison in wages of male and female workers could not be made. The entrepreneurs estimated that on an average, in a year over half the printers (55.56%) earn a monthly wage between Rs.300 and Rs.400, about 37 per cent earn above Rs.400 and 7.4 per cent below Rs.300.

Labour Supply

The variations in the length and duration of peak season at this centre are not very great. This may be because the work handled by the handprinting units at Madurai was at a comparatively small level. For a majority of the establishments (63.3 %) there was no specific busy season. However, some of them said that they get more job work from consumers prior to some of the important festivals, such as Diwali and Tamil New Year's day. The remaining 36.7 per cent of the entrepreneurs informed that the rainy season was a lean period for their establishments. Thus, the normal period of their work was about nine months a year. Only two of the respondents reported that their requirement of labour increases significantly around the festivals when they get more job work. One of them reported that he met it by using unutilised family labour while the other entrepreneur hired more non-household labour.

Most of the entrepreneurs (70%) reported easy availability of printers whenever they need more workers. Only a few of them (3) informed that they have to pay a higher wage to workers engaged for a short period during emergency. The increase in wages in such cases range from Rs. 2/- to Rs. 4/- per day.

The problems of labour turn-over and absenteeism among workers were almost non-existent as 29 of the 30 selected entrepreneurs reported that they have no such problems in their establishments. However, some of the units (30%) offer some incentives to their workers so that they stay in their estab-

blishments and also attend to the work regularly. The incentives include one month's salary in a year as bonus, festival advance, loans for medical treatment and other purposes.

## II. EMPLOYMENT, EARNINGS AND LIVING CONDITIONS OF WORKERS

In the earlier pages, certain aspects relating to the handprinting workers were described on the basis of information received from employers. In the following pages, an attempt has been made to portray the working and living conditions of workers based on the responses of seventy five workers interviewed through a separate interview schedule. The purpose of interviewing the handprinting workers was to find out their background, their employment position in the industry, service conditions and employer-employee relations in their establishments. Their conditions of living have also been studied as they have a direct relationship with their service conditions in the handprinting industry.

### Some General Characteristics

Most of the workers were in the middle age group as nearly two-thirds of them were over thirty years old. The remaining one-third of the workers were in the age group 21-30 years. None of the selected workers was illiterate, though their schooling was limited upto High School. About 51 per cent of them had studied upto middle level (senior basic classes), 28 per cent upto high school and 21 per cent upto primary classes. The majority of the workers were Hindus (70.67%) and among them 79 per cent belonged to backward and scheduled castes. Christians

(18.67%) and Muslims (10.66%) made up the remaining workers. Since most of the workers were in the middle age group their association with this industry has been for quite a long duration. The largest proportion of workers (44.0 %) had been associated with the handprinting industry for a period ranging from 6 to 10 years, 37.33 per cent for a period of 11 years or more and only 18.67 per cent for a period of upto five years. About four-fifths of the selected workers (81.3 %) were employed in Karkhana type nonhousehold establishments and 18.7 per cent in small household units. Almost all the workers (94.7 %) were regular employees and their wages were paid on time rate basis. All the workers started their career from their jobs in the handprinting industry. However, the handprinting job had been carried out on a hereditary basis by only 48 per cent of workers while families of 52 per cent of workers had been engaged in other jobs. This indicates that the handprinting industry has considerable attraction. The reasons of attraction for these workers when they entered into the industry were 'easily available jobs' and 'regular income'.

The average monthly income of selected workers in a year from handprinting work was Rs.425.34. The break-up of workers in different income groups indicates that the majority of workers (54.7 %) were earning between Rs.300-400. One-third of the workers were getting between Rs.401 and Rs.500 and 12 per cent over Rs.500 p.m. The selected workers were the only earners in their families and, therefore, the members of their households depended only on income from their handprinting jobs.

Employment and Unemployment

A significant aspect of the conditions of employment of printers at Madurai is that they don't face unemployment. In our sample about 95 per cent of the workers stated they were regular employees of the establishments while only 5 per cent were casual workers. None of the respondents reported seasonal variations in the availability of employment. All of them were getting work for all the working days throughout the year. Most of the workers were working for 8 hours a day (88.0 %). However, some (12.0 %) were working from 6 to 10 hours a day, depending on the quantity and quality of work. The situation was similar for workers working in both karkhana type units and small household units. Thus, there is no serious problem of unemployment among the handprinting workers of this centre. This is possibly because : (a) the handprinting establishments depend more on direct customers and there is sufficient job work from this source, and, (b) the strength of printers in the area and the quantum of work available in the units seems more or less matched. The availability of regular job work from direct customers throughout the year has saved the workers from job insecurity during certain seasons, and the absence of a large number of surplus printers in the area has further helped the workers in getting regular employment.

Earnings

Since the printers were getting work regularly their monthly earnings throughout the year remain the same. The wages were paid on time rate basis, calculated on the basis of number of days a worker attends to his work. The workers were not affected by seasonal variations and, therefore, were earning fixed monthly wages throughout the year. A majority of the selected workers were earning between Rs.300 and Rs.400 per month. Table 10 presents distribution of selected workers in the different wage groups.

Table 10 : Average Monthly Wages of Workers

Wage groups (Rs.)	Number	Percentage
300-400	41	54.67
401-500	25	33.33
501 or more	9	12.00
TOTAL	75	100.00

On further analysis we find that a greater proportion of workers were earning wages at higher end of each of the three wage groups. For example, about 78 per cent workers in the wage group of Rs.300-400 were, in fact, earning between Rs.350 and Rs.400, 52 per cent were earning Rs.500 in the Rs.401-500 group and about 56 per cent got Rs.600 per month in the Rs.501 or more wage group.

The average monthly earnings of a worker came to Rs.427. The earnings of workers engaged in small household units were lower than those working in Karkhanas. The disparities in wages of printers engaged in the two types of handprinting establishments were, however, not too great. The average wages of workers in small units were found to be 91.34 per cent of the average wages paid to similar categories of workers by the Karkhana type units.

Table 11 : Average Monthly Wages of Workers Working in Different Types of Establishments

Type of establishment	Average Wages
Karkhana	434.02
Small Household Unit	396.42
All Establishments	427.00

To increase earnings workers have hardly any opportunity of working over-time. The work-system at Madurai is such that the workers have to complete a fixed quota of job during a day. Some printers complete it in less than 8 hours while some others complete their assignment in a shorter/longer period. However, those who complete it earlier have to stay in the unit for eight hours. They are generally not given extra work. A very small number of the selected workers have additional sources of income - one has a bidi-cigarette shop while three were getting rent for the portion of their house rented to others. The additional monthly income of these four workers were less than Rs.100.00 each from these other sources.

All the respondents reported that their monthly earnings from handprinting occupation had increased during the last five years. The average monthly wages of workers were Rs.305 five years back, Rs.355 three years back and Rs.427 during the period of investigation. Thus, as compared to five years back the average monthly earnings of workers had increased by 16.39 per cent three years back and by 20.28 per cent at the time of study as against the wages earned three years before. The over-all rise in average wages during the last five years comes to 40.0 per cent. On an average, the increase in earnings of workers during the last five years has, therefore, been at the rate of about 8.00 per cent per year.

A large majority of the respondents (93.3 %) expressed their intention to continue in their present occupation of handprinting despite the fact that a majority of the workers (65.3 %) felt that there were no opportunities for advancement or upward mobility in the present job. They thought that there were no chances of printers becoming entrepreneurs. The feeling of security of job was, however, strong among the respondents. All of them were hopeful that with the experience in handprinting they will get a job in other establishments easily, if they desire to leave their present employer.

#### Employer-Employee Relations

The employer-employee relations were considered satisfactory by all the selected workers who termed their relationship with their employers as 'harmonious'. They had no seri-

ous problems with their masters and were satisfied with their service conditions. However, on a specific enquiry pertaining to the employers' attitude towards the needs of their workers a large majority of the respondents felt that their employers were indifferent towards medical care, advances/loans, fringe benefits and leave. The responses are presented in Table 12.

Table 12 : Employers' Attitude Towards the Needs of Their Workers

Need of workers	Employers' attitude			Total
	Sympa- thetic	Indiffe- rent	Unsympa- thetic	
Leave	16 (21.33)	57 (76.00)	2 ( 2.67)	75 (100.00)
Advances/Loans	11 (14.67)	63 (84.00)	1 ( 1.33)	75 (100.00)
Fringe benefits	11 (14.67)	62 (82.67)	2 ( 2.66)	75 (100.00)
Medical Care	1 ( 1.33)	74 (98.67)	-	75 (100.00)
Timely Payment	74 (98.67)	1 ( 1.33)	-	75 (100.00)

Figures in brackets represent percentages.

A large proportion of workers think that the attitude of their employers was of 'indifference' towards some of their needs. However, almost all of them also reported that their employers were prompt in payment of wages. A very small proportion of respondents termed the attitude of their masters towards some of their needs as unsympathetic. On the other

hand, about one-fourth of the respondents were of the view that their employers had a sympathetic attitude towards leave and about 15 per cent of workers felt the same way with regard to fringe benefits and advances/loans etc. The situation suggests that there was no serious tension between workers and employers over certain needs of the employees. Information pertaining to another question reveals that 50.67 per cent of the selected workers were getting one month's wages as annual bonus while two workers reported having received from their employers some amount of money as festival advance.

In order to improve the conditions of printers the respondents thought that certain measures were urgently required. About 88 per cent of the selected workers suggested one or more such measures, which are presented below with the percentage of respondents suggesting them :

1. Periodical upward revision in wage rates (54.55%);
2. Payment of Dearness Allowance like factory workers (43.94%);
3. One month's wages as annual bonus (19.70%);
4. Medical allowance (19.70%);
5. Payment for the days when there is no work (10.61%);
6. Paid festival holidays (7.58%); facility of festival advance (4.55%);
7. 15 days annual paid leave (3.03%); and
8. Loan for housing (1.52%).

### Conditions of Living

Over three-fourths (77.3%) of the families of selected respondents were small, consisting of upto a maximum of three members. About one-fifth of the families (21.3%) had four to six members while one family had seven members.

The monthly household expenditure of a substantial proportion of workers (45.34%) on food, clothing, children's education, durable goods, ceremonies, transport and personal services was between Rs.301 and Rs.400 and that of 17.33 per cent between Rs.201-300. Thus, the monthly household expenditure of about 63 per cent of workers was between Rs.201 and Rs.400. A majority of the small-sized families (53.45%) spend between Rs.301-400 while half of the families of medium size (50.0%) spend between Rs.401-500. The lone family consisting of seven members spends over Rs.500 p.m. About four-fifths of the medium-sized families (81.25%) spend over Rs.400 p.m. as against only about one-fourth (24.14%) of small-sized families. Table 13 presents the break-up of monthly household expenditure of different size of families.

Table 13 : Size of Family and Monthly Household Expenditure

Family members	Monthly expenditure (Rs.)				
	201-300	301-400	401-500	500+	Total
Upto 3	13 (22.41)	31 (53.45)	13 (22.41)	1 (1.73)	58 (77.34)
4-6	-	3 (18.75)	8 (50.00)	5 (31.25)	16 (21.33)
7+	-	-	-	1 (100.00)	1 (1.33)
TOTAL	13 (17.33)	34 (45.34)	21 (28.00)	7 (9.33)	75 (100.00)

Table 13 indicates only the aggregate position with regard to consumption. In an attempt to determine the socio-economic status of this population we have further analysed the data. Table 14 presents per capita monthly expenditure of the selected workers and their families. The data relates to consumption items only.

Table 14 : Per Capita Monthly Household Expenditure

Family members	Per capita expenditure
Upto 3	188.90
4-6	125.81
7 +	85.71
TOTAL	162.56

Before we analyse Table 14 we would like to clarify that the per capita household expenditure accounts for only those family members who live with the worker. The dependents living outside have, thus, been excluded even if their financial needs are fulfilled by the respondents. Some of the respondents (16) were staying in Madurai separately and their dependents were living at their native places. Such workers have been included in the family size group of 'upto 3 members'.

The per capita monthly expenditure of the total sample on consumption items comes to Rs.162.56. It has been found to be negatively related to the size of family, i.e. the smallest families were able to spend highest amount on consumption items

per head and the largest families had the lowest per capita expenditure. On updating the Planning Commission's criterion for determining the poverty line i.e. a per capita expenditure of upto Rs.62.0 on private consumption during 1973-74, we find that the family consisting of seven members was living below the poverty line.

The monthly expenditure of workers on certain non-food items and entertainment was also enquired into. Every one of the respondents spent certain amount on one or more such items which included smoking, alcohol, tobacco/pan and films/entertainment. The highest average monthly expenditure was recorded in the case of 20 per cent of workers consuming alcohol (Rs.30). Over four-fifths of the respondents (84.0 %) spent on an average Rs.20.40 per month on films/entertainment; 61.33 per cent spent Rs.20.44 on an average on smoking; and, 22.67 per cent workers spent an average of Rs.14.22 per month on tobacco/pan. On an average a worker was spending Rs.40.07 per month on these items.

About 59 per cent of the selected respondents reported some expenditure on medical treatment of self or their family members. The average annual expenditure on this items comes to Rs.126.14 - about 12 per cent of them spending Rs.200 or more. We have, earlier, mentioned some of the suggestions of our respondents which they considered to be urgently required. About 20 per cent of them had also suggested medical allowance for printers. It seems there was a genuine need for some scheme of medical and health assistance for handprinting workers.

### Indebtedness

Nearly fifteen per cent of the respondents had incurred debts, mostly for meeting consumption needs. A total of 11 workers had secured loans for different purposes : household expenditure (7), religious ceremonies (2) and medical treatment (2). The main source through which they secured loans was 'friends' (6) followed by relatives (4) and employers (1).

Thus the workers had neither borrowed any amount from the banks nor from the moneylenders. None of the indebted respondents reported paying any interest on borrowings. The period of indebtedness has been quite short in all the eleven cases - ranging from a few months to a year. Most of the loans were of small amount as about 55 per cent of the indebted workers had borrowed upto Rs.200, about 9 per cent of such workers had obtained between Rs.201-400 while about 36 per cent of the indebted respondents had secured between Rs.401-600.

### Housing

Over 57 per cent of the selected workers were living in rented accommodation while nearly 43 per cent were occupying own houses. Among the owners about 94 per cent had ancestral houses and about 6 per cent had purchased/constructed their present houses themselves. A majority of the respondents occupying rented accommodation were paying to their landlords a comparatively small amount as house rent. The amount of

monthly rent of these houses itself indicates that the quality of accommodation was not satisfactory. About 14 per cent of them were paying upto Rs.30 and about 49 per cent in between Rs.31 and Rs.50 per month. Thus, about 63 per cent of those living in rented houses were paying house rent of less than Rs.50 per month and about 37 per cent were paying over Rs.50 per month.

Nearly three-fourths (72.0 %) of workers were living in either fully Kutcha (25) or partly Kutcha and partly Pucca (29) houses. As far as the accommodation was concerned about 15 per cent were living in a single room, about 47 per cent had two rooms and the remaining 38 per cent had three or more rooms. More of those living in rented accommodation had smaller houses than those owning their houses. For example, among the workers occupying rented residential accommodation about 23 per cent had one room, 61 per cent had two rooms and about 16 per cent three or more rooms in their houses while among those owning their houses about 3 per cent had one room, 28 per cent two rooms and 69 per cent three or more rooms.

Nearly four-fifths of the houses (78.67%) had electricity but 65.34 per cent of the residences had no running water and 50.67 per cent had neither independent toilet nor separate bath-room facilities. They had to share common toilets and bathrooms with a number of families ranging from five to nine or more. Most of the households of selected workers (68.42%) were sharing common toilet and bathrooms with more than five families.

### Conclusion

The pace of development of handprinting industry at Madurai has been quite slow. The art of handprinting of textiles was confined to only a few families during the nineteenth century. By 1900 only four small units for this work were established. During the next fifty years about fifty medium and small size units were established. The pace of growth of handprinting industry accelerated significantly from 1955. All the large units, numbering about 57, were established between 1955 and 1970. The number of establishments of different size increased to 380 by 1980-81. Since a large majority of the handprinting units were not registered with any government agency the exact position with regard to the number of units, their size and level of activity was difficult to ascertain. However, at the time of present study, conducted during February-July 1981 it was estimated that nearly 6000 non-household workers including about 3000 printers were attached to this industry on a full-time basis. The total investment in the form of fixed and working capital was estimated at about two crore rupees. The fixed capital constituted about 80 per cent of the total investment. The total value of handprinted textiles was estimated at about Rs. 3.50 crores.

In our sample of 30 handprinting establishments 19 were run on proprietary and the rest on partnership basis. The partnership in a majority of cases was restricted to the mem-

bers of the entrepreneurs family. Thus, about 83 per cent of the units were family owned. Most of the units (25) were established by their present owners and among them only two entrepreneurs belonged to the family of wage earning printers. The handprinting establishments of Madurai do not feel threatened by competition from the organised sector. The entrepreneurs were satisfied over the prevailing market trends in favour of handprinted textiles.

The data indicate a positive relationship between size of establishments and net annual earnings. However, the average earnings per printing table of the large establishments shows the lowest earnings though in absolute terms this group of units exhibits a remarkable increase in earnings over a period of ten years. Such a situation suggests that the large establishments are not in a position to utilize their capacity to the maximum. The units carrying out job work in their own small units as well as sub-contracting the work to other units earned relatively lower income as compared to other types of establishments.

Objectively, support to small household units seems very much required. Such establishments need working capital on easy terms, which will help them in buying raw materials in large quantities. This will also help them in printing their own textiles for sale. At this point it may also be suggested that there is a need for establishing a corporation exclusively for the handprinting industry through which financial

assistance including some subsidy can be given to small units for expanding their printing capacity. The corporation should also supply raw materials at reasonable rates and arrange for marketing of the products of those who are registered with it.

In order to improve the earnings of handprinting workers the selected entrepreneurs laid emphasis on (a) greater initiative among workers in introducing new designs; (b) developing superior skills among workers which help produce better finished work; and, (c) higher productivity. These are possible if the suggested corporation for the handprinting industry also undertakes some training programmes for printers.

The average employment per establishment recorded an increase of about 211 per cent during the period of ten years. The increase in the number of workers during the last five years was significantly higher. The average number of workers per unit five years back increased by about 57 per cent over the strength of workers ten years back while in the last five years it recorded an increase of about 98 per cent over the average employment in these units five years back. The rise in number of workers is in consonance with the increase in the quantum of production. For example, the average production per establishment during the last ten years increased by about 133 per cent. However, in comparison to the average production ten years back the selected units produced about 41 per cent more during the period of five years back while the average

production of these units had increased by about 65 per cent last year over the production five years back. The position of employment and production suggests that the industry was expanding relatively at a faster pace now than earlier.

The relative employment advantage of the handprinting industry is that it is labour intensive. Besides hired workers, a number of household workers also work in their family's unit. The handprinting establishments of Madurai have the characteristics of a traditional family business in which the wages of the non-household employees are generally very low and the share of the household workers in earnings is significantly large. One significant point to be mentioned here is that the printers of this town earn comparatively better wages than their counterparts in other handprinting centres. The main reason is that the workers get work throughout the year and there is no serious effect of rainy season on their wages. The workers working in Karkhana type establishments were getting about 10 per cent higher wages than those working in small household units.

The entrepreneurs do not face any shortage of printers in case they need additional hands and there are no serious problems like absenteeism and labour turn-over. This indicates that (a) the size of workforce available in the market was sufficient for the existing establishments, and, (b) the opportunities for alternative employment in Madurai were very limited. However, most of the printers associated with an estab-

blishment work as regular employees. They, therefore, do not face unemployment in the normal circumstances. Due to these conditions a large majority of them intend to continue in their present occupation of handprinting despite the feeling of about two-thirds of these workers that they do not have opportunities for upward mobility.

While suggesting measures for improving conditions of printing workers about 55 per cent of workers demanded periodical upward revision in wage rates; 43.9 per cent wanted payment of dearness allowance at par with other factory workers; and 19.7 per cent demanded one month's wages as annual bonus and medical allowance.

The system of recruitment at this centre is direct and, therefore, no middlemen are involved. There is no trade union of handprinting workers and all the respondents termed their relations with their employers as 'harmonious'. However, on further probing they were found satisfied with their employers attitude with regard only to timely payment of wages. Only a small proportion of workers felt the attitude of their employers with regard to certain other needs of workers, such as leave (21.3 %), loans and advances (14.7 %), fringe benefits (14.7 %) and medical care ( 1.3 %) was sympathetic. Thus, most of the workers thought their employers had no consideration for their genuine needs. Considering responses to various questions it seems the workers are very much concerned over non-existence of medical facilities for the handprinting workers and, therefore, its necessity is emphasised.

As regards the living conditions, 15 per cent of workers were indebted. The money was borrowed from friends and employers for meeting consumption needs. Though the period of indebtedness has been quite short i.e. upto one year, yet it indicates the weak economic conditions of a sizeable section of the workers. The living conditions as indicated by the type of housing occupied by them also suggests their poor economic position. In our sample of seventy-five workers nearly three-fourths were living in either fully Kutcha or partly Kutcha and partly Pucca houses. Among them 25 workers were occupying fully Kutcha and 29 workers were staying in partly pucca houses; 15 per cent had only a single room and 47 per cent double room accommodation. About 65 per cent of the houses had no running water and 51 per cent had neither independent toilet nor separate bathroom facilities and, therefore, their occupants have to share common toilets and bathrooms with a number of other families. Thus, the conditions of workers, working in the handprinting industry at Madurai cannot be called satisfactory. The chances of printers becoming entrepreneurs are remote. In the present conditions there is hardly any possibility of improvement in their working conditions. Despite this, most of them prefer to stay in this industry as there is hardly any alternative opportunity of a promising future for them in and around Madurai.

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